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<151> 2000-05-25

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<170> PatentIn Ver. 2.1

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<212> DNA

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Thr Glu Lys Gln Ala Lys Asn Tyr Asn Glu Gln Asp Lys Gly Asn Tyr
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Gly Asn Ile Asp Thr Ala Tyr Phe Ser Asn Asn Gln Leu His Val Ser
      130          135          140

Gly Trp Asn Ala Thr Asn Ala Ser Gln Gly Thr Asn Ser Arg Gln Ile
      145          150          155          160

Ile Val Arg Asp Ile Thr Thr Asn Asn Glu Leu Gly Arg Thr Asp Val
      165          170          175

Thr Asn Asn Val Ala Arg Pro Asp Val Lys Asn Val His Asn Val Tyr
      180          185          190

Asn Ala Asp Asn Ser Gly Phe Asp Val Asn Val Asn Ile Asp Phe Ser
      195          200          205

Lys Met Lys Asp Tyr Arg Asp Ser Ile Glu Ile Val Ser Arg Tyr Ser
      210          215          220

Gly Asn Gly Lys Ser Val Asp Trp Trp Ser Gln Pro Ile Thr Phe Asp
      225          230          235          240

Lys Asn Asn Tyr Ala Tyr Leu Asp Thr Phe Glu Val Lys Asn Gly Glu
      245          250          255

Leu His Ala Thr Gly Trp Asn Ala Thr Asn Ser Ala Ile Asn Tyr Asn
      260          265          270

His His Phe Val Ile Leu Phe Asp Gln Thr Asn Gly Lys Glu Val Ala

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275	280	285
Arg Gln Glu Val Arg Glu Gly Gln Ser Arg Pro Asp Val Ala Lys Val 290 295 300		
Tyr Pro Gln Val Val Gly Ala Ala Asn Ser Gly Phe Asn Val Thr Phe 305 310 315 320		
Asn Ile Ser Asp Leu Asp Tyr Thr His Gln Tyr Gln Val Leu Ser Arg 325 330 335		
Tyr Ser Asn Ser Asp Asn Gly Glu Gly Asp Asn Val Thr Tyr Trp Phe 340 345 350		
Asn Pro Gln Ser Ile Ala Pro Ala Asn Gln Ser Asn Gln Gly Tyr Leu 355 360 365		
Asp Ser Phe Asp Ile Ser Lys Asn Gly Glu Val Thr Val Thr Gly Trp 370 375 380		
Asn Ala Thr Asp Leu Ser Glu Leu Gln Asn Asn His Tyr Val Ile Leu 385 390 395 400		
Phe Asp Gln Thr Ala Gly Lys Gln Val Ala Ser Ala Lys Ala Asp Leu 405 410 415		
Ile Ser Arg Pro Asp Val Ala Lys Ala Tyr Pro Thr Val Lys Thr Ala 420 425 430		
Thr Asn Ser Gly Phe Lys Val Thr Phe Lys Val Asn Asn Leu Gln Pro 435 440 445		
Gly His Gln Tyr Ser Val Val Ser Arg Phe Ser Ala Asp Glu Asn Gly 450 455 460		
Asn Gly Asn Asp Lys Arg His Thr Asp Tyr Trp Phe Ser Pro Val Ile 465 470 475 480		
Leu Asn Gln Thr Ala Ser Asn Ile Asp Thr Ile Thr Met Thr Ser Asn 485 490 495		
Gly Leu His Ile Ala Gly Trp Met Ala Ser Asp Asn Ser Ile Asn Glu 500 505 510		
Thr Thr Pro Tyr Ala Ile Ile Leu Asn Asn Gly Lys Glu Val Thr Arg 515 520 525		
Gln Lys Met Ser Leu Thr Ala Arg Pro Asp Val Ala Ala Val Tyr Pro 530 535 540		
Ser Leu Tyr Asn Ser Ala Val Ser Gly Phe Asp Thr Thr Ile Lys Leu 545 550 555 560		
Thr Asn Asp Gln Tyr Gln Ala Leu Asn Gly Gln Leu Gln Val Leu Leu 565 570 575		
Arg Phe Ser Lys Ala Ala Asp Gly Asn Pro Ser Gly Asp Asn Thr Val		

885	890	895
Asn Ile Glu Lys Arg Ile Ser Glu Thr Gly Asn Thr Asp Trp Leu Arg 900 905 910		
Thr Leu Met His Asp Phe Val Thr Asn Asn Pro Met Trp Asn Lys Asp 915 920 925		
Ser Glu Asn Val Asn Phe Ser Gly Ile Gln Phe Gln Gly Gly Phe Leu 930 935 940		
Lys Tyr Glu Asn Ser Asp Leu Thr Pro Tyr Ala Asn Ser Asp Tyr Arg 945 950 955 960		
Leu Leu Gly Arg Met Pro Ile Asn Ile Lys Asp Gln Thr Tyr Arg Gly 965 970 975		
Gln Glu Phe Leu Leu Ala Asn Asp Ile Asp Asn Ser Asn Pro Val Val 980 985 990		
Gln Ala Glu Gln Leu Asn Trp Leu Tyr Tyr Leu Leu Asn Phe Gly Thr 995 1000 1005		
Ile Thr Ala Asn Asn Asp Gln Ala Asn Phe Asp Ser Val Arg Val Asp 1010 1015 1020		
Ala Pro Asp Asn Ile Asp Ala Asp Leu Met Asn Ile Ala Gln Asp Tyr 1025 1030 1035 1040		
Phe Asn Ala Ala Tyr Gly Met Asp Ser Asp Ala Val Ser Asn Lys His 1045 1050 1055		
Ile Asn Ile Leu Glu Asp Trp Asn His Ala Asp Pro Glu Tyr Phe Asn 1060 1065 1070		
Lys Ile Gly Asn Pro Gln Leu Thr Met Asp Asp Thr Ile Lys Asn Ser 1075 1080 1085		
Leu Asn His Gly Leu Ser Asp Ala Thr Asn Arg Trp Gly Leu Asp Ala 1090 1095 1100		
Ile Val His Gln Ser Leu Ala Asp Arg Glu Asn Asn Ser Thr Glu Asn 1105 1110 1115 1120		
Val Val Ile Pro Asn Tyr Ser Phe Val Arg Ala His Asp Asn Asn Ser 1125 1130 1135		
Gln Asp Gln Ile Gln Asn Ala Ile Arg Asp Val Thr Gly Lys Asp Tyr 1140 1145 1150		
His Thr Phe Thr Phe Glu Asp Glu Gln Lys Gly Ile Asp Ala Tyr Ile 1155 1160 1165		
Gln Asp Gln Asn Ser Thr Val Lys Lys Tyr Asn Leu Tyr Asn Ile Pro 1170 1175 1180		
Ala Ser Tyr Ala Ile Leu Leu Thr Asn Lys Asp Thr Ile Pro Arg Val		

185	1190	1195	1200
Tyr Tyr Gly Asp Leu Tyr Thr Asp Gly Gly Gln Tyr Met Glu His Gln	1205	1210	1215
Thr Arg Tyr Tyr Asp Thr Leu Thr Asn Leu Leu Lys Ser Arg Val Lys	1220	1225	1230
Tyr Val Ala Gly Gly Gln Ser Met Gln Thr Met Ser Val Gly Gly Asn	1235	1240	1245
Asn Asn Ile Leu Thr Ser Val Arg Tyr Gly Lys Gly Ala Met Thr Ala	1250	1255	1260
Thr Asp Thr Gly Thr Asp Glu Thr Arg Thr Gln Gly Ile Gly Val Val	1265	1270	1275
Val Ser Asn Thr Pro Asn Leu Lys Leu Gly Val Asn Asp Lys Val Val	1285	1290	1295
Leu His Met Gly Ala Ala His Lys Asn Gln Gln Tyr Arg Ala Ala Val	1300	1305	1310
Leu Thr Thr Thr Asp Gly Val Ile Asn Tyr Thr Ser Asp Gln Gly Ala	1315	1320	1325
Pro Val Ala Met Thr Asp Glu Asn Gly Asp Leu Tyr Leu Ser Ser His	1330	1335	1340
Asn Leu Val Val Asn Gly Lys Glu Glu Ala Asp Thr Ala Val Gln Gly	1345	1350	1355
Tyr Ala Asn Pro Asp Val Ser Gly Tyr Leu Ala Val Trp Val Pro Val	1365	1370	1375
Gly Ala Ser Asp Asn Gln Asp Ala Arg Thr Ala Pro Ser Thr Glu Lys	1380	1385	1390
Asn Ser Gly Asn Ser Ala Tyr Arg Thr Asn Ala Ala Phe Asp Ser Asn	1395	1400	1405
Val Ile Phe Glu Ala Phe Ser Asn Phe Val Tyr Thr Pro Thr Lys Glu	1410	1415	1420
Ser Glu Arg Ala Asn Val Arg Ile Ala Gln Asn Ala Asp Phe Phe Ala	1425	1430	1435
Ser Leu Gly Phe Thr Ser Phe Glu Met Ala Pro Gln Tyr Asn Ser Ser	1445	1450	1455
Lys Asp Arg Thr Phe Leu Asp Ser Thr Ile Asp Asn Gly Tyr Ala Phe	1460	1465	1470
Thr Asp Arg Tyr Asp Leu Gly Met Ser Glu Pro Asn Lys Tyr Gly Thr	1475	1480	1485
Asp Glu Asp Leu Arg Asn Ala Ile Gln Ala Leu His Lys Ala Gly Leu			

1490	1495	1500
Gln Val Met Ala Asp Trp Val Pro Asp Gln Ile Tyr Asn Leu Pro Gly 505 1510 1515 1520		
Lys Glu Val Ala Thr Val Thr Arg Val Asp Asp Arg Gly Asn Val Trp 1525 1530 1535		
Lys Asp Ala Ile Ile Asn Asn Asn Leu Tyr Val Val Asn Thr Ile Gly 1540 1545 1550		
Gly Gly Glu Tyr Gln Lys Lys Tyr Gly Gly Ala Phe Leu Asp Lys Leu 1555 1560 1565		
Gln Lys Leu Tyr Pro Glu Ile Phe Thr Lys Lys Gln Val Ser Thr Gly 1570 1575 1580		
Val Ala Ile Asp Pro Ser Gln Lys Ile Thr Glu Trp Ser Ala Lys Tyr 585 1590 1595 1600		
Phe Asn Gly Thr Asn Ile Leu His Arg Gly Ser Gly Tyr Val Leu Lys 1605 1610 1615		
Ala Asp Gly Gly Gln Tyr Tyr Asn Leu Gly Thr Thr Thr Lys Gln Phe 1620 1625 1630		
Leu Pro Ile Gln Leu Thr Gly Glu Lys Lys Gln Gly Asn Glu Gly Phe 1635 1640 1645		
Val Lys Gly Asn Asp Gly Asn Tyr Tyr Phe Tyr Asp Leu Ala Gly Asn 1650 1655 1660		
Met Val Lys Asn Thr Phe Ile Glu Asp Ser Val Gly Asn Trp Tyr Phe 665 1670 1675 1680		
Phe Asp Gln Asp Gly Lys Met Val Glu Asn Lys His Phe Val Asp Val 1685 1690 1695		
Asp Ser Tyr Gly Glu Lys Gly Thr Tyr Phe Phe Leu Lys Asn Gly Val 1700 1705 1710		
Ser Phe Arg Gly Gly Leu Val Gln Thr Asp Asn Gly Thr Tyr Tyr Phe 1715 1720 1725		
Asp Asn Tyr Gly Lys Met Val Arg Asn Gln Thr Ile Asn Ala Gly Ala 1730 1735 1740		
Met Ile Tyr Thr Leu Asp Glu Asn Gly Lys Leu Ile Lys Ala Ser Tyr 745 1750 1755 1760		
Asn Ser Asp Ala Glu Tyr Pro Thr Ser Thr Asp Val Gly Lys Met Leu 1765 1770 1775		
Asp Gln Asn Lys Leu 1780		

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22

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47